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# **IT REALLY IS BLACK AND WHITE WHEN YOU LOOK AT IT LIKE THAT: A STUDY OF THE TEACHING-RESEARCH NEXUS**

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## **INTRODUCTION**

In Australian universities many professors have been promoted because of their leadership in research rather than teaching. Having developed valuable leadership skills in their roles, they have much to offer in Teaching and Learning (T&L) leadership. This project aims to build this potential by building teaching leadership, initially in the disciplines of Engineering and ICT through a combination of studying the current thinking of the professoriate through a survey and conducting group workshops for the exchange of ideas and suggestions to overcome the challenges faced. This is a 2 ½ year project funded by the Australian Learning and Teaching Council (ALTC) that has currently completed its first 15 months. This extended abstract presents the results of the surveys and the workshops conducted so far with an aim to encourage recognition of the fundamental importance of teaching in the professoriate, and to facilitate the transfer of the practices and the project model developed within the Engineering and ICT domains to other disciplines and universities.

## **BACKGROUND**

According to Scott, Coates & Anderson (2008) 'Australia is facing significant higher education leadership succession challenge' (Scott et al., 2008). This project seeks to strategically address this identified problem. Furthermore, since 2003, Information and Communication Technology (ICT) faculties have experienced an unprecedented downturn in student numbers, despite strong employer demand (ACS, 2008). Similarly, the Engineering sector has also failed to attract enough students to meet employer demand (TAD, 2005). Historically both disciplines also experience low Course Experience Questionnaire (CEQ) scores. Leadership Competency in T&L has also been shown to be particularly low in IT, Engineering and Technology (Scott et al., 2008). Both disciplines were critically aware of the need for action and so were ripe for cultural change.

The published literature contains only a few studies that examine the relationship between faculty research activity and student outcomes as distinct from student rating. Halsea, Deane, Hobson & Jones (2007) found that outstanding university teachers are also active researchers, but are unlikely to publish about their teaching or about improving teaching practice in universities. Caplow and McGee (1954) were among the first to study the interesting dichotomy created by institutions that hire faculty primarily

to teach but give them promotion and salary advancement based primarily on their research and scholarship. This project seeks to strategically address this identified need and build a community of practice (CoP) within the three universities – Queensland University of Technology (QUT), University of Technology-Sydney (UTS), and Monash University – that aims to serve as model for attracting more undergraduate students into research while also nurturing post graduate students to completion.

## **METHODOLOGY**

Professorial academics of Engineering and Information Technology and Science were invited to offer information on their Research and T&L views and behaviours. The primary areas targeted were: job satisfaction, leadership behaviour, and perceptions of professional importance. A survey was developed and the primary questions asked were: a) To what extent do you gain personal job satisfaction from each of the following? b) To what extent do you try to be a role model for each of the following? and, c) How important are the following for advancement in the academic profession? Each question listed a set of matched indicators for teaching and research, about 15 for each, both T & L indicators and research indicators. Likert-style responses were invited on a continuum from 1 to 5, with 1 the lowest level of satisfaction/commitment/importance, and 5 the highest.

The study focused on ICT and Engineering faculties, and these were the faculties that were surveyed in all three institutions. Further matched questions asked how strongly their Research and L&T efforts were encouraged and supported by their seniors. The questionnaire also included a number of optional demographic questions and room for comments and qualitative input. The results of the surveys were analysed and the findings were disseminated within the faculties across the three universities during faculty workshops in early 2010. These workshops initiated and encouraged a dialogue within the professoriate of the issues involved.

## **FINDINGS**

72 academics participated in the survey: 15 from Monash, 14 from UTS, 43 from QUT. Most of the surveys were administered during faculty meetings. The results show that very few teaching indicators score above the median line, and very few research indicators score below the median. Some other findings include:

- (a) The participants were unequivocally in favour of research over teaching. T-tests for differences between the mean responses to the three sets of matched items revealed highly significant differences between Research and L&T at the 0.01 level in all three areas. That is, Professorial and Associate Professorial staff in these four Faculties across three universities
  - gain far higher job satisfaction from research activities than they do in L&T activities;
  - commit far more effort to being role models for Research activities than they do to L&T activities;

- perceive Research activities to be of far greater importance for professional advancement than L&T activities.
- (b) Professorial staff also feel that their seniors encourage them more for Research effort than for L&T effort (significant at the 0.05 level).
- (c) Resourcing for the two areas is deemed about the same.

The findings confirmed that irrespective of the individual differences within faculties and between universities, the rankings are remarkably consistent across the three universities and highlight the challenge faced by Australian universities in the area of Teaching and Learning. When one of the head of schools was presented us with his completed survey, he exclaimed: 'Ouch, it really is black and white when you look at it like this!'

## **DISCUSSION AND CONCLUSION**

The results show that there is a significantly stronger commitment to research than to teaching both within the professoriate and the non-professoriate academics in all three universities. Although universities are predicated on T & L activities, the unspoken consensus seems to favour research over teaching. During the workshop discussions conducted as part of this project, many opinions and ideas were shared by the academic participants to overcome this gap including providing more support for teaching activities, more scholarships for research students to increase retention, and more involvement of research students in teaching their areas of research, just to list a few. It has been frequently noted that we need to find ways to pipeline our researcher through the undergraduate curriculum. Recruiting talented students and researchers alone is not enough. Universities and academics need to put in a lot of effort to provide feedback, direction, vision, examples, role modelling, and the right attitude to both students and faculty in order to address this leadership succession challenge that looms in the future of Australian higher education.

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## **REFERENCES**

- ACS News (Australian Computer Society) 2008, 'ACS Foundation pushes ICT marketing initiative' *Information Age*, 04/01/2008  
 [http://www.infoage.idg.com.au/index.php/id;574303655;fp;32768;fpid;1505163483 Last accessed 4th July 2008]
- Caplow, T, & McGee R 1958, *The Academic Marketplace*, New York, Basic Books.

- Halsea, C, Deane, E, Hobson, J, & Jones, G, 2007 'The research–teaching nexus: what do national teaching awards tell us?' *Studies in Higher Education*, 32(6) 727–746.
- Scott, G., Coates, H.. & Anderson, M. (2008) 'Learning leaders in times of change. Academic Leadership Capabilities for Australian Higher Education' *ALTC Report*.  
[[http://www.altc.edu.au/carrick/webdav/site/carricksite//users/siteadmin/public/grants\\_leadership\\_uws\\_acer\\_finalreport\\_june08.pdf](http://www.altc.edu.au/carrick/webdav/site/carricksite//users/siteadmin/public/grants_leadership_uws_acer_finalreport_june08.pdf) Last accessed 4th July 2008]
- TAD Technical Careers and Contracts, 2005 Press Releases, 'Engineers: Hottest job in Town in 2005', [<http://www.tad.com.au/news/pressrelease.htm> Last accessed 4th July 2008] Wenger, Etienne (1998), *Communities of Practice: Learning, Meaning, and Identity*, Cambridge: Cambridge University Press, pp. 318, ISBN 978-0-521-66363-2

### **BRIEF BIOGRAPHY OF PRESENTER**

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